Message

From: Bertrand, Charlotte [Bertrand.Charlotte@epa.gov]
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To: Morris, Jeff [Morris.Jeff@epa.gov]; Beck, Nancy [Beck.Nancy@epa.gov]
Subject: FW: BNA: CDC Sounds Alarm on Chemical Contamination in Drinking Water

FYSA

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CDC Sounds Alarm on Chemical Contamination in Drinking Water

Snapshot

• Top official raises concern about water contaminated with perfluorinated chemicals
• Official says up to 10 million Americans likely drinking water with high concentrations of these chemicals

A top environmental official at the Centers for Disease Control and Prevention said the scientific community is just beginning to grasp the scope of how much drinking water could be contaminated with a potentially toxic class of industrial chemicals.

The presence and concentrations of perfluorinated chemicals in U.S. drinking water is "one of the most seminal public health challenges for the next decades," Patrick Breysse, a senior official at the CDC, said at an Oct. 17 conference in North Carolina.

Breysse estimated that up to 10 million Americans could be drinking water with concentrations of perfluorinated chemicals above the Environmental Protection Agency's health recommendation.

The compounds are used to give heat-, water- and stain-resistant properties to products including carpets, clothing, fast-food wrappers, water-proofing sprays and cookware.

Given the decades-long use of perfluorinated chemicals and their propensity to reach groundwater and surface waters, it won't be too long before "we think hundreds of millions of Americans will be drinking water with levels of these chemicals above levels of concern," Breysse said.

"We know a little bit about two of them," Breysse said referring to the compounds PFOA and PFOS. "We know precious little about most" he said, referencing related substitutes like GenX and other fluorinated compounds.

Fighting Fire With Foam

Perfluorinated chemicals such as PFOA (perfluorooctanoic acid) and PFOS (perfluorooctanesulfonic acid) were widely used as flame retardants, especially in foams used on military base air fields for training to put out fires.

The main factor that makes these chemicals so troublesome is that they degrade into the environment very slowly, allowing them to seep out of underground storage tanks that were buried decades earlier.

There are at least 65 sites in the U.S. where exposure to PFOA, PFOS, or the two substances combined, is above the EPA's health advisory of 70 parts per trillion, Breysse said. Some states have set enforceable drinking water limits at concentrations much lower than the EPA's, he said.

Exposure to perfluorinated chemicals at high levels can cause a host of health problems, including decreased fertility, increased cholesterol, increased rates of kidney, bladder, testicular and prostate cancers, and depressed immune systems, Breysse said.

The Agency for Toxic Substances and Disease Registry (ATSDR), where Breysse works, is preparing a toxicological profile for PFOA and PFOS that it anticipates completing in 2018, he said.

Scared People Lose Trust

Meanwhile, communities across the U.S. want to know if the perfluorinated chemicals in their drinking water and breast milk are harming them and their children, and "we have to tell them we don't know," Breysse said.

When people are scared about their water supply, they lose trust in their government, he said. "We've seen that over and over again across the country."

States nearly always bring up their concerns about these chemicals when ATSDR's scientists and health officers meet with them, he said.

Paul Locke, director of the Division of Response and Remediation at the Massachusetts Department of Environmental Protection, said: "As a citizen, I would be a little bit worried, because we don't know as much as we should. Or, we don't know as much as we need to."

As a regulator, Locke said Oct. 16 at the Association for Environmental Health and Sciences Foundation conference in Amherst, Mass., one of his responsibilities is to ensure that remediation professionals who are conducting assessments and cleanups at contaminated sites know to look for perfluorinated chemicals.

Although PFOS and PFOA have been classified as emerging contaminants, Locke noted that they've existed for decades. "Frankly, we haven't been looking for them in the environment," he said.

Budget Buster

The Pentagon will be footing the bill for much of the cleanup because perfluorinated chemicals were used so heavily on military bases. Military officials have estimated that remediating contaminated soil and water will ultimately cost upwards of $2 billion. By comparison, the Pentagon estimates that it will cost $25 billion to address all other environmental contaminants on military bases.

Additionally, communities near manufacturing plants that produced these chemicals have also experienced contamination problems with their water. This has triggered several class-action lawsuits against the manufacturers, which include the chemical companies Chemours and Saint-Gobain.

Paul Ponturo, who previously ran the public water authority in Suffolk County, N.Y., said that while many people are focusing on perfluorinated chemicals in drinking water, it's important to remember that people can be exposed through other means. He told Bloomberg Environment that the scientific community has a long way to go before it can put together a full picture of how people are exposed to these chemicals, in what amounts, and how they ultimately affect health.

In the meantime, he said, water utilities will likely have to invest much more to beef up their capacity for detecting and treating perfluorinated chemicals, even at very low amounts.

"It's definitely still an evolving issue," Ponturo, who is now a water resources engineer with the consulting firm H2M, said. "You're going to find more sources."

To contact the reporters on this story: Pat Rizzuto in Washington at prizzuto@bna.com; David Schultz in Washington at dschultz@bna.com; Sylvia Carignan in Washington at scarignan@bna.com

To contact the editor responsible for this story: Rachael Daigle at rdaigle@bna.com